

PANEL III

MEASURES FOR PROTECTING AND MANAGING FLORIDA SPRINGS

Moderator: Dr. Rodney DeHan

Panelists: Mr. Gary Maidhof, Citrus County
Mr. Chris Rison, Marion County
Mr. Bruce Day, Withlachoochee Regional Planning Council
Mr. Charles Gauthier, Florida Department of Community Affairs
Mr. Dan Pennington, 1000 Friends of Florida

This panel was assigned the task of discussing regulatory measures or land use and management practices that may be used to protect Florida's springs. This panel recognizes the social, economic, and political dimensions of environmental problems. Often these are more challenging than technology or science. As Reed Noss, editor of the journal *Conservation Biology*, has written, "Scientists cannot simply hand over data to bureaucrats or politicians and expect them to make rational and prudent decisions about complex problems they know and care little about."

Specifically the panel was to answer these questions:

- What is currently being done to manage and protect Florida springs? Do we have the tools—statutory, regulatory, scientific, practical, educational—to protect and manage springs?
- Where are the gaps in protection and management? Are we getting the maximum out of existing tools? Are they being enforced and implemented? Do we need a new strategy for protecting and managing springs? What should the elements of this strategy be?

INTRODUCTORY REMARKS FROM PANELISTS

Local Perspective

Mr. Gary Maidhof, Citrus County

In Citrus County there are three first magnitude springs—Chassahowitzka, Homosassa, and Kings Bay—all publicly owned but surrounded by private property. In Citrus County the population has doubled in the last 20 years, from 60,000 to 120,000.

Three main points regarding growth management regulations should be kept in mind:

1. The Comprehensive Plan is a blueprint for growth. It is a public process that you have to sell within the community. You cannot just put into the plan what you think you need. Amendment to the comprehensive plan is also a public process.
2. Land development regulations are a more flushed out version of the comprehensive plan policies; again, this is a public process. The issue becomes to educate the community of the need for these and their value.
3. Local communities have to be able to legally defend their regulations. They have to justify that regulations are for the public good. Since 1996 with the passage the Bert Harris Jr. Private Property Rights Act, the burden is on local governments to justify and to defend their regulations. Under the Bert Harris Act, any action of government that “inordinately burdens” the fair market value of real property may be legally challenged. If local governments cannot justify and defend their regulations, they need to be prepared to compensate landowners for economic losses as the result of the regulations, something no local government wants to do with tax dollars.

Mr. Chris Rison, Marion County

Within developed Marion County are first-magnitude Rainbow Springs and Silver Springs. First-magnitude Silver Glen Springs is within Ocala National Forest. Land in Marion County falls into three categories: national forest, floodplain, and karst areas. Marion County has undertaken a number of measures to protect its springs. An environmentally sensitive overlay zone has been delineated around all of the county's springs. By delineating such a zone, you can modify development density established in the comprehensive plan. Marion County has prohibited class 1,2, and 3 landfills in karst areas and has developed incentives for clustering development in both rural and urban areas. In cooperation with the state, Marion County has purchased land adjacent to Rainbow Springs.

Regional Perspective

Mr. Bruce Day, Withlacoochee Regional Planning Council

Withlacoochee Regional Planning Council encompasses five counties (Marion, Sumter, Levy, Citrus, and Hernando), each of which has very significant water features. Regional planning councils are responsible for review of Developments of Regional Impact (DRI). A DRI is a very large development that affects more than one county. Regional planning councils are also required to adopt Strategic Regional Policy Plans.

State Perspective

Mr. Charles Gauthier, Florida Department of Community Affairs

There will be legal challenges to land use regulations. These regulations need to be scientifically based. We are early in the development of land use planning. The scientific foundation is not yet firmly in place.

DCA reviews 400 comprehensive plan amendment packages each year. Our activities are often more like “zoning” than “planning.” We get caught in a zoning review mode and become too busy to sit back and focus on bigger issues such as springs and their protection. Local governments do not have to consider springs per se in their local comprehensive plans, although a Ground Water Element is required.

We do not currently have standards in place designed to protect springs, but there are some success stories that we can perhaps draw upon:

1. **The Villages** is a huge and growing development in Marion, Sumter, and Lake counties, which will ultimately cover 30,000 acres and consist of 51,000 dwelling units. The population will be greater than the population of half of the counties in Florida. This development was ranked first or second in the nation in terms of rate of growth: 2000 units were built in one year alone. The development is aggressively marketed to retirees and has health care and entertainment as well as residential components. All that separates the land surface from the aquifer is a 50-foot veneer of sand, making the potential for pollution of the groundwater is very high.

What was done? The first and key step was the establishment of an ad hoc task force consisting of the water management district, the regional planning council, the Department of Community Affairs, local governments, and the developer. A cooperative face-to-face relationship between the developer and government is critical.

Areas of special vulnerability were delineated and standards developed to protect these areas. Standards were developed for stormwater management and golf course design and maintenance; restrictions were placed on turf for lawns; education programs were developed for homeowners regarding the importance of protecting resources; and groundwater monitoring requirements were put in place.

The Villages is very successful, and other developers are looking at this same model. The coasts of southeast and southwest Florida are already developed. A wave of development is spreading along the central spine of Florida and will spread north and west to the Suwannee region and to the panhandle, places rich with springs. The planning capacity of many of these once-rural counties is limited. Technical assistance to these counties must go hand in hand with regulation.

2. **Rainbow Springs.** This development wraps around parts of the state park. The developer wanted to amend the DRI to relocate a golf course upgradient from the spring.

What was done? An interagency task force was again used to delineate areas of special vulnerability. Standards for groundwater management and turf were developed, and a preservation area established. The developer dropped 1100 dwelling units and some commercial development from his plan. The developer did not have to make these changes but did so as a result of the interagency task force, an extensive face-to-face cooperative process.

In response to one of the recommendations of the Springs Task Force, the Department of Environmental Protection has developed a best management practices manual for land around springs. This is more of an orientation than an exact description of what to do. In the manual a distinction is made between primary and secondary zones, where lands uses and standards are going to be different. From the developer's point of view, you have to be able to answer the question Why is my land inside the primary zone and my neighbor's is not?

What is the next step? Do we need to develop a technical manual for local governments based on case studies and available science. Also, what should the relationship be between land use planning and environmental permitting? Does this relationship need to be strengthened?

In sum we need:

- Legally defensible growth management standards to protect springs.
- An orderly gradation of protection zones
- A more technical extension of Best Management Practices Manual
- A closer relationship between planning and permitting
- Enhancement of the planning capacity of local governments in the Suwannee region and in the panhandle.

Mr. Dan Pennington, 1000 Friends of Florida

We are working with the state to develop a planning and best management practices manual for springsheds. Everyone sees the need to protect the "big pretty water," but they do not see the impact of land uses upgradient: as people come, nutrients follow.

What can we do?

- Use Florida's comprehensive plan process more effectively
- Establish working groups (for example, Wakulla Springs Working Group)
- Adopt a resolution of support for springshed protection
- Collect data and map the resource; establish zones of protection
- What can you do as a local government with limited funds?

A good example of what can be accomplished with limited funds is Wakulla Springs. The Wakulla Springs springshed is quite large, encompassing all of Leon County. Data collection and mapping were narrowed down to caves and sinkholes identified by divers. The group then drafted a working map and developed land use regulations and protection zones as well as a strategy for land acquisition. The group also worked closely with landowners to help them protect the resource.

Discussion of Wekiva River Protection Act

The Wekiva River Protection Act was discussed as another possible model for springshed protection. The law was an outgrowth of concerns of local citizen groups in the late 1980s who realized that local governments were not addressing increasing threats to the river and the river corridor from development. In addition to protecting the river, citizens wanted to establish wildlife corridors to the Ocala National Forest, particularly for the Florida black bear.

The act did encourage land acquisition and probably stopped a lot of development. The highest recharge areas for the river, however, are outside the zone of protection and many had been developed prior to the act. The act perhaps relied too much on the local government comprehensive planning process to protect the Wekiva River System. The act did not address groundwater or require water budgets, a critical need in an area running out of groundwater and aggressively seeking surface water. Citizen groups were critical to the success of the Wekiva legislation. Passage of the act was the culmination of a sustained five-year effort. With a grant from the Elizabeth Ordway Dunn Foundation, Friends of the Wekiva produced a professional report, *The Wekiva River—A Resource in Danger*. They met with county commissioners and legislators and gave presentations to newspaper editorial boards. One newspaper produced a series of Pulitzer-prize winning articles on the river. The staff of Seminole County checked their figures and reported them to be 95% accurate. Today, politics have changed, and for the most part legislators are not as supportive of environmental legislation as elected officials were in the late 1980s.

Available Tools

The panel proceeded to discuss vehicles or tools already in existence at the state or local level that may be used or improved upon. Those were the following:

The Intergovernmental coordination element of the local comprehensive plan is an underrecognized/underutilized tool. The local comprehensive planning process itself has a number of limitations. The cumulative effects of comprehensive plan amendments undermine the planning process, although citizen groups can oppose and recommend denial of amendments. The goals, objectives, and policies of the comprehensive plan need to be clear to be effective. The planning capacity in many counties is severely limited. Many comprehensive plan policies are not currently enforced.

Infrastructure Element of local comprehensive plan—Stormwater is required to be addressed in this element. New developments must provide for retention and detention of stormwater. Local governments are not required to consider quality of the stormwater, which is the responsibility of the water management districts. Therefore the current stormwater requirements within the local comprehensive plans have limited applicability to springshed protection.

Future land use map—You can overlay zones to protect springs, spring runs, sinkholes, high recharge areas, and you can establish primary and secondary zones.

Management plans required for all publicly owned lands—These are potential tools, but currently they include very little about springs and their protection.

Voluntary stewardship programs—Through these programs, citizens can participate in a wide range of activities to benefit the environment. On-going programs that may be used as models for voluntary stewardship programs in springsheds include EPA's Adopt a Watershed and stewardship programs of Environment Canada.

Consumptive use permits. The usefulness of these permits for water withdrawals issued by the water management districts to protect springs is limited because they are not tied to minimum levels and flows.

Minimum levels and flows. Springs need to be a top priority for establishment of minimum flows and levels. Legislation this year (2002) requires establishment of minimum levels and flows for all first-magnitude springs. This requirement should be extended to second- and third-magnitude springs. The water management districts were first required to establish MFLs by the Water Resources Act of 1972. Although some progress has been made in recent years, much remains to be done. If the water management districts do not establish MFLs, no one will. This is the responsibility of the water management districts, and the Florida Legislature should require MFLs to be established within a set timeframe. Today's reality is that spring protection cannot wait on the water management districts to establish MFLs. The usefulness of MFLs is also limited if they are not tied to consumptive use permits.

Concurrency. The Growth Management Act (Chapter 163, Florida Statutes), administered by the Department of Community Affairs, requires infrastructure to be in place when a development comes on line (that is, when the first resident moves in). Since this law applies to potable water supply and does not address effects of development on the water for the natural environment, it has limited applicability to springshed protection. In addition, the water management districts, not the Department of Community Affairs, issue the consumptive use permits for new developments.

Buffering around sinkholes—Areas should be established around sinkholes where polluting activities are prohibited.

Local ordinances. For example, Lake County passed a golf course ordinance that requires golf courses to have a water use plan, to minimize irrigation, to use native grasses, and to be prepared to use reused water when it becomes available.

Ecotourism. Through ecotourism, people can learn about and actively participate in the conservation of an area. Before you can protect something, people have to know it exists. Tourists might pay fees or make contributions that support local conservation areas. This is a tool local government can use to preserve land and to increase public awareness. For example, the Leon Sinks Trail contributes to understanding and appreciation of the Wakulla Springs watershed. Ecotourism also brings additional dollars to the local community.

Emergency Management Response Team in DEP, network in place to respond to spills in springsheds.

Emergency Crimes hotline in DEP to report people dumping in springs and sinkholes

The press. Include, involve, inform

Land Acquisition Programs. Target the most vulnerable portions of the springshed for purchase.

Education of farmers, homeowners, and other landowners. One specific tool to increase citizen awareness and community support is through Old Timers Day, when seniors get together and share their stories. Currently held at Ichetucknee Springs, Silver Springs, and Wakulla Springs.

Consensus: Many good things are on the books. What is lacking is implementation and enforcement as well as explicit attention to springs and springsheds. If current regulations and their intent—MFLs, comprehensive plans, concurrency, groundwater rules, etc—were implemented and enforced, the limpkin would not be gone from Wakulla Springs and Florida springs would not be threatened by blooms of cyanobacteria. Whether different models should be developed for pristine and developed springsheds was discussed. Separation was rejected since in Florida most springsheds are a dynamic combination of rural, developed, and mixed land uses.

Discussion of Value of Legislation

Legislation gives an issue legitimacy and statewide concern. While education and public awareness are helpful and necessary, experience has shown that regulation with adequate enforcement backed by legislative authority is the only measure that works. Although grassroots organizations were the driving force behind the Wekiva legislation, they cannot be expected to do everything. These organizations are by their nature small and volunteer based. They need funding as well as the help and support from agencies and scientists. You also need the political will of elected officials. Under the current political climate, it is not popular to rock the growth boat. To get the support of county commissioners and state legislators, we need to show them the economic value of springs to the community and the larger value of conserving water in relation to the cost of developing alternative supplies. This is where we should spend our research dollars.

Legislation can require local comprehensive plans and state lands management plans to explicitly address springsheds.

Discussion of Potential of Local Government Land Use Planning

There is adequate regulation and legislative authority on the books that if implemented would result in protection of springs. Such implementation, however, is not currently practical because of the lack of site-specific data, lack of public awareness, and lack of political will.

The process is in place, but data and analysis on springs and springsheds has to be included in the comp plan in sufficient detail to drive goals and land development regulations. The data in the report *First Magnitude Springs of Florida* (Florida Geological Survey Open File Report No. 85) should go into the appropriate comprehensive plans. In the absence of legislation, there are four ways to initiate an amendment to the local comp plan: by the Board of County Commissioners, the Planning Board, by staff based on the best available data, or by citizens. When budgets are being set, ask county commissioners when specific goals and objectives of the comprehensive plan relating to springs are going to be met.

To be successful local government land use planning must also include improved private property owner participation in the process.

Conclusion Day 1

The panel resolved that:

The Springs Initiative Task Force in cooperation with the Hydrogeology Consortium, grassroots organizations, and other concerned parties will draft legislation to protect Florida's springsheds.

The legislation would contain the following elements that were discussed in more detail during the workshop's second day.

Local Comprehensive Plan

1. Modification of the Conservation Element to require the identification of springs and springsheds. Focus on the ecological significance of water in addition to its public drinking water supply value for humans.
2. Include springs within the Infrastructure Element under potable water, solid waste, drainage, waste water, and stormwater runoff; focus on the relationship between wastewater management and springshed health.
3. Tie springs to future land use map; future land use map should reflect springshed recharge areas or zones of contribution.
4. Include policies of springshed protection in the Intergovernmental Coordination Unit
5. Include springs and their value in the Economic Development Element (although this is an optional element, it's very important to many communities)
6. Require state agencies to comply with local comprehensive plans

Implementation of comprehensive plans should not be tied to detailed springshed delineation, which might take several years to complete; use best available data now, do not wait.

The Strategic Regional Policy Plans (prepared by the regional planning councils) should address springs as well.

Funding

1. Possible sources of funding to protect springs: Put a dollar value on water consumed by Floridians and direct funding generated to springshed protection; \$1/per year/per person user fee, perhaps as part of utility bill; surveys show support of vast majority of Floridians for protection of the environment; tax/fee on bottled water withdrawn from springs; tax on quick-release fertilizers; use portion of WMD consumptive use permit fee; issue a springs vehicle license tag; put a fee on facilities polluting groundwater.
2. “Fund the machinery that keeps the springs healthy.” The tools needed to keep springs healthy—local comprehensive plans, land acquisition and conservation programs, technical assistance, research, and monitoring—must be adequately funded.
3. Fund technical assistance to local governments, especially in low-millage and/or low tax base counties in the Suwannee and Northwest Florida water management districts.

Land Conservation/Land Acquisition

1. Raise the priority of springshed acquisition and conservation under CARL and other land acquisition programs.
2. Use hydrogeological boundaries for springshed acquisition and conservation. Identify springs showing high nutrient concentration trends
3. Consider and encourage use of less-than-fee simple acquisition including conservation easements, transfers of development rights, Bluebelts, water farms, rural stewardship programs (DCA), and conservation leases. The current Florida Bluebelt law gives a tax break to land-owners who preserve land in high groundwater recharge areas, but has proved to be of limited impact because the state does not compensate counties for tax shortfalls.
4. Encourage appropriate cluster development
5. Provide incentives for low-impact development
6. Direct DOT to consider springshed boundaries in stormwater retrofitting activities
7. Allow homeowners to use approved xeriscape landscaping without restrictions or limitations from local powers.
8. Cooperate with and direct DACS in implementation of more stringent standards for fertilizer use in springsheds.

Education

1. Fund grassroots education on springshed protection and management.
2. Require counties to have Florida Yards and Neighbors program
3. Install interpretive kiosks in springsheds
4. Share springshed awareness information with DACS staff

5. Utilize xeriscape and water conservation BMPs in all publicly owned facilities, e.g. schools, DOT, IFAS
6. Work with homeowners associations in educating their members about fertilizer applications in springsheds
7. Give incentives for BMP use in springsheds

Interagency/Intergovernmental Coordination

1. Direct DEP, DOH, DOT and other state agencies to adopt environmental (ecological) standards for springshed water quality
2. Fund studies evaluating the dynamics and impacts of groundwater/surface-water interaction in springsheds
3. Develop and use BMPs in springsheds

Media Involvement

1. Use press releases
2. Invite media to participate in grassroots efforts
3. Share spring information with newspaper editorial boards

Conclusion

Florida springs are North and Central Florida's environmental equivalent of South Florida's Everglades. They need special and explicit attention today. Science is not enough. We must compel elected officials to take action before yet another piece of natural Florida is gone forever.